

Title (en)

SECURITY PRINTING INCLUDING DEPOSITING METALLIC INK ONTO A DIFFRACTION GRATING

Title (de)

SICHERHEITSDRUCK MIT BESCHICHTUNG VON METALLISCHER TINTE AUF EIN BEUGUNGSGITTER

Title (fr)

IMPRESSION DE SÉCURITÉ COMPRENANT UN DÉPÔT D'ENCRE MÉTALLIQUE SUR UN RÉSEAU DE DIFFRACTION

Publication

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Application

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Abstract (en)

[origin: WO2005051675A2] There is provided an apparatus and a method of printing a diffraction grating. In particular, the present invention relates to diffraction gratings applied to a substrate, such as a hologram.

IPC 8 full level

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Citation (examination)

WO 2005049745 A1 20050602 - WOLSTENHOLME INTERNAT LTD [GB], et al

Cited by

DE102017001348A1; US10926573B2; WO2023170376A1; US10052903B2; WO2016015973A1; WO2023089190A1

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